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ABSTRACT

This study had two purposes: to examine the expertise of doctoral students in their use of the scholarly literature and to investigate the use of citation analysis as a tool for collection development. Analysis of 1,842 coded citations gleaned from 30 education dissertations awarded in 2000 from 3 institutions in the United States revealed that journal articles, at 45%, were cited most frequently, followed by monographs (33.9%) and "other" (18.3%), with magazines and Web sites contributing less than 2% each of the total material types cited. The study examined 858 journal and magazine citations, which were found in 239 unique titles. A relatively small number of journals contained a high percentage of the references found in the dissertations analyzed. Based on a design by D. Kohl and L. Wilson (1986), dissertation citations were also scored for scholarliness, currency, and appropriateness of format, and scores on the three criteria were averaged to arrive at a quality rating. Results of interinstitutional comparisons revealed a significant amount of variation and were considered in conjunction with institutional characteristics and published criteria for quality bibliographies. The data suggest that the assumption of doctoral student expertise in their use of the scholarly literature may be overstated and should be examined in relation to their preparation for professional status. For purposes of developing a library's research collection, a core list of titles, generated on the basis of multiple, rather than single, institutional analysis is indicated. (Contains 8 figures, 11 tables, and 28 references.) (Author/SLD)

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CHARACTERISTICS OF EDUCATION DOCTORAL DISSERTATION REFERENCES: AN INTER-INSTITUTIONAL ANALYSIS OF REVIEW OF LITERATURE CITATIONS

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Abstract

This study had two purposes, to examine expertise of doctoral students in their use of the scholarly literature of the field, and to investigate the use of citation analysis as a tool for collection development. Analysis of 1842 coded citations gleaned from 30 education dissertations awarded in 2000 from three institutions in the United States revealed journal articles, at 45%, were cited most frequently, followed by monographs (33.9%) and "other" (18.3%), with magazines and Web sites contributing less than 2% each of the total material types cited. The study examined 858 journal and magazine citations, which were found in 293 unique titles. A relatively small number of journals contained a high percentage of the references found in the dissertations analyzed. Based on a design by Kohl and Wilson (1986) dissertation citations were also scored for scholarliness, currency, and appropriateness of format and scores on the three criteria were averaged to arrive at a quality rating. Results of inter-institutional comparisons revealed a significant amount of variation and were considered in conjunction with institutional characteristics and published criteria for quality bibliographies. The data suggest that the assumption of doctoral student expertise in their use of the scholarly literature may be overstated, and should be examined in relation to their preparation for professional status. For purposes of developing a library's research collection a core list of titles generated on the basis of multiple, rather than single, institutional analysis is indicated.

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Christine Barry (1997) writes that successful doctoral students tend to be "comprehensive and up to date in reviewing the literature," and accordingly, their dissertations offer an abundance of bibliographic information. This articulates a fundamental assumption that as the doctoral dissertation is the capstone to the formal academic training process, associated bibliographies are high quality, comprehensive in scope, and reflect emerging research areas. A limitation of this assumption is the lack of sound empirical evidence to support it. Very few studies have been conducted exploring the quality of dissertation references, and no studies were identified in the field of education. Those studies that have investigated the quality of citations generally report on such topics as completeness of cited references (Williams, 1997) and the increasing use of electronic resources (Davis & Cohen, 2001; Davis, 2002; Herring, 2002).

Dissertation citation analysis has frequently been proposed as an in-house means to identify journals most important for the research collection (Buttlar, 1999; Gooden, 2001; Kriz, 1984; Walcott, 1994; among others). Gooden (2001) suggests citation analysis is a useful tool for both eliminating low use journals and purchasing needed ones. One potential limitation of relying on dissertation references to create core journal lists is that the overwhelming majority of these studies only consider dissertations awarded by a single institution. Kuyper-Rushing (1999) developed a core journal title list gleaned from music dissertation bibliographies from across the United States and compared them to a single institution's list. She concluded analysis of a single institution could result in a skewed list of journals and suggested a broader institutional base to arrive at a more objective list of core journals. Without further analysis, is it reasonable to conclude, as Gooden (2001) does, that the current collection is sufficient for doctoral level research? Or, is it equally plausible to consider that students lack the skills necessary to perform an exhaustive review of the literature and procure information available external to the institution?

The role and purpose of the review of literature in the research process can be found in almost any book on research design and methodology (e.g., Babbie, 1998; Creswell, 1994; Fraenkel & Wallen, 1996) and journal editors lament submitted manuscripts often fail to adequately address the existing body of scholarly literature (Grant & Graue, 1999; Hernon, 1994; St. Clair & Hernon, 1996), thus offering that the subject is both well defined and of interest to the educational community. Additionally, a number of authors have commented upon the quality of published educational research (Hall, Ward, & Comer, 1988; Tuckman, 1990; Ward, 1975) and reported much of it flawed, of mediocre quality, or otherwise seriously deficient. Although the review of literature was only one component of the studies being examined, the review is considered an essential part of any reported research.

Only one study was identified that directly addressed the issue of the doctoral dissertation literature review. Zaporozhetz (1987) reported that not only did doctoral students feel their library use skills were inadequate, but their faculty advisors admitted they had little knowledge of information retrieval themselves, they expected their students to have bibliographic skills at the doctoral level, and they ranked the review of literature chapter the lowest when considered in relation to the remaining standard dissertation chapters.

The above-mentioned studies focus on the body of published research in education, but also have implications for adequacy of professional preparation. As such, results of this study will be of interest to professors of doctoral students, professors of educational research, and faculty who sit on doctoral dissertation review committees. Academic librarians with instruction or collection development responsibilities will also find this information pertinent.

Similar to earlier studies, this study presumes dissertation citations are indicative of doctoral students' demonstrated ability to locate and evaluate scholarly information. However, earlier assumptions of *quality* of doctoral student review of the literature performance are examined by assessing various characteristics of dissertation citations. Specifically, this study explores the questions:

1) What are the characteristics of citations in recently awarded doctoral dissertations in the field of education?
2) How does a core journal list from a single institution compare to a list derived from analysis of multiple institutions?
3) And, what is the relative quality of doctoral dissertation citations?

Method and Data Sources

Defined as a wide-ranging area of bibliometrics, citation analysis studies the citations to and from documents (Diadoto, 1994), and is one method often used to generate core lists of journals deemed critical to the research needs of an institution. Research studies employing citation analysis methodology are often conducted by evaluating a sample of citations from student dissertations to develop a core list of journals, and subsequently, to determine what proportion are locally held and the estimated strength of the collection (Strohl, 1999).

Thirty education dissertations awarded in the year 2000 from three institutions in the United States were examined. Each of the institutions offered doctoral degrees in education, similar acceptance rates to the graduate education program, and a comparable number of education faculty. Two institutions were purposely chosen for their similarities in total enrollment (43,000 students in 2000), date of institutional establishment (mid-1850s), and presence among the top ranked schools of education ("Schools of Education," 2000). The third institution was selected for purposes of contrast as it was not included in the list of top ranked schools, and enrollment (31,500 in 2000) and date of establishment (mid-1960s) differed.

Dissertation Abstracts and respective institutional library catalogs were searched to identify all dissertations awarded by the colleges of education from each institution in 2000. Results were grouped into the general topic areas of educational leadership, educational psychology, instructional or learning theory, and teacher education. A purposive sample of ten dissertations across topic areas and from each institution was generated and the full dissertation was obtained.

Information extracted from each dissertation included the name of the granting institution, the total number of citations in the bibliography, the number of citations coded, and the number of pages of the dissertation. Citations were coded by date of publication, type of material cited, journal or magazine title (if relevant), and material format (print or electronic). Types of material consisted of journal, magazine, Web site/not electronic journal, monograph, or "other." Examples of items included in the category of "other" were ERIC documents, dissertations and theses, conference proceedings and presentations, and personal communications.

To address the question of doctoral students' assumed ability to thoroughly mine the scholarly information available citations were evaluated on the criteria of scholarliness, currency, and appropriateness of the source to the subject being developed. Based on earlier work by Kohl and Wilson (1986), these criteria were defined as:

- Scholarliness; how good was the fit of the source for the topic? (Did the student use empirical, peer-reviewed journal articles rather than accounts in general magazines? Or, did the student use sources from scholarly presses rather than popular publishers?)
- Currency; was an appropriate decision made regarding retrospective versus contemporary sources for the topic? (If the student required recent research on a particular topic were journal articles rather than books consulted?)
- Appropriateness; was the material type appropriate for treatment of the topic? (If the student needed to develop their rationale for use of a learning theory, was a book more appropriate than an encyclopedic entry?)

Dissertations were distributed among three evaluators (one education and two library faculty), with each evaluator assigned three dissertations from each institution, plus one additional. The evaluators read the abstract and thesis chapter to familiarize themselves with the scope and intent of the dissertation and then independently scored references cited in the literature review chapter. As independent evaluations were performed inter-rater consistency was tested using a two-way mixed effects model of the intraclass correlation coefficient in SPSS version 10.0. The average of the scores of the three evaluators was found to be sufficiently reliable (interval of 0.6766 to 0.9345 with 95% confidence), suggesting that the evaluators were able to successfully and consistently differentiate among different levels of performance.

Although Kohl and Wilson (1986) scored each of the criteria in their model on a four-point scale, evaluators in the current study slightly modified their method by using a four-point scale for scholarliness and a three-point scale for currency and

appropriateness. The same criteria were applied to both print and electronic formats. Data were analyzed at the institutional level and overall. Descriptive statistics were generated for dissertation and citation characteristics. Core lists of journals from each institution were evaluated for duplicate and unique titles, and then compared to institutional holdings to determine the percentage of items locally available. Both Kruskal-Wallis and one-way ANOVA tests were conducted examining differences among institutions.

Results and Conclusions

Overall, the number of citations coded for this study was 1842. The total number of citations per dissertation ranged from a low of 25 to a high of 159 (M = 87.70, SD = 32.54). As the study was limited to analysis of the review of literature only references from this chapter were coded. The number of citations coded ranged from18 to 137 (M = 61.40, SD = 32.01). The length of dissertations, without appendices, ranged from 76 pages to 329 pages (M = 146.10, SD = 63.06). For purposes of reporting institutions are referred to as 1, 2, and 3, with 2 being the institution of contrast as noted in the previous section. See Table 1 for dissertation characteristics by institution.

Analysis of all 30 dissertations revealed journal articles were cited most frequently, accounting for 45% of citations coded. Journal articles were followed by monographs (33.9%), and "other" (18.3%), with magazines and Web sites totaling less than 2% each of the total material types cited. Disciplines vary in their modes of scholarly communication, and these results suggest that while professional journals remain the predominant medium for disseminating scholarly information in the field books and book chapters continue in their importance.

The "other" material type category contained 337 items, or 18.3% of coded citations. ERIC documents accounted for 35.6% of these materials, followed by abstracts of dissertations (15.1%), conference papers and presentations (14%), doctoral dissertations (9.5%), research reports (9%), and law and legislation (6.5%). The remaining 10.3% were comprised mainly of company reports, email correspondence, unpublished or submitted manuscripts, policy papers, and master's theses. More than one in ten of all coded citations were ERIC documents, doctoral dissertations, or abstracts of dissertations. The heavy student reliance on and faculty acceptance of items such as these, that vary immensely in quality, is surprising.

Considerable variation of material type cited was found among institutions. Notably, dissertations from Institution 1 cited an equal number of journal articles and monographs (both 43.8%), while the remaining institutions relied more heavily on journal articles. Also, Institution 2 cited "other" materials much more frequently, at 31.3%, than the other institutions, which were around 10%. See Table 2 for material type by institution.

In this study, Web sites were differentiated from electronic journals for purposes of identifying types of sources, but not format. Web sites, which accounted for 1.3% of coded citations, were evaluated on the same criteria as other citations. In addition to the 24 Web sites coded another 28 items were cited as retrieved electronically for a total of 52 items, or 2.8%, of coded citations. Of the 52 links, which were presumably working at the time the dissertations were written, 28 (54%) were no longer viable and 24 (46%) were still extant at the time of this study. Of the 28 electronically retrieved items not coded as Web sites, nine were journal articles and the remaining 19 items consisted of email correspondence, abstracts, law and legislation, and policy papers and research reports.

Previous research (Davis, 2002; Davis & Cohen, 2001; Herring, 2002; Rusch-Feja & Siebeky, 1999) suggests that users prefer electronic information as compared to print materials. With this in mind, it was unexpected that citations to electronic information comprised such a small proportion of the reference list. Given the access to full-text electronic articles available at the time the dissertations were written, it is plausible candidates retrieved information electronically, yet were not aware of conventions for citing electronic information.

Of the 1842 references analyzed 858 were journal and magazine citations, which were found in 293 unique titles. Of these, 111 journal citations and 28 magazine citations (139 total, or 16.2%) were not peer-reviewed. The average date of publication for coded journal and magazine citations was 1990 (SD = 7.79). The top 17 journals accounted for 290, or 33.8%, of the citations coded. The mid-tier, which contained 65 journal titles, returned 309, or 36% of the citations. The remaining 259 citations (30.2%) were retrieved from 211 titles.

This pattern is consistent with Bradford's Law, which suggests that the published journal research in a field falls into three zones, each of which includes an approximately equal number of articles, while the number of journals required to produce those articles increases substantially from one zone to the next (Wallace, 1989). Essentially, Bradford, and many researchers since, have concluded that a core number of journals publish an inordinate amount of cited articles (Kriz, 1984; Kuyper-Rushing, 1999; Radhakrishna, 1994; Summers and Clark, 1986; among others). Table 3 lists the top 17 journals that were cited most frequently overall.

Journal and magazine titles cited were also examined and core lists distinct to each institution derived. Significant overlap of titles was found among institutions, but a surprising number of titles unique to individual institutions were also discovered. Of the 95 journal and magazine titles cited in Institution 1 dissertations, 56, or 58.9%, were unique to the institution Similarly, of the 137 titles cited in Institution 2 dissertations 92, or 67.2%, were cited only by candidates from that institution. Finally, of the 142 titles cited in Institution 3 dissertations 92, or 64.8%, were unique. Tables 4 through 6 list the most frequently cited journal titles by institution.

Similar to Gooden (2001), this study found, across all institutions, that research collections overwhelmingly contained the sources cited by doctoral students. Journal and magazine titles were checked in the online library catalogs of the institutions. Of the 196 references cited by Institution 1 candidates, 19, or 9.3%, were not locally held, 90.7% were owned. Likewise, of the 298 references cited by Institution 2 students, 21, or 7%, were not owned by the institution, 93% were owned. Of the 362 references cited by Institution 3 students, only 11, or 3%, were not locally owned, 97% were.

To arrive at some explanation of student reliance on local collections dissertation citations were scored for scholarliness, currency, and appropriateness of format. The criterion of scholarliness was scored based on journal prestige within the discipline and the field, presence or absence of peer review, and consideration of empirical, research-based studies rather than program descriptions. Citations were also rated on currency, or their timeliness of publication. The date of publication was considered in context of type of material and usage in the literature review, and the raters recognized when currency was not an issue. Appropriateness, or fit of the material type to the topic being developed, was considered in relation to maturity of the field. Scores on the three criteria were averaged to arrive at an overall quality rating.

Across all coded citations, the mean statistic for scholarliness was 2.70 (SD = .80), skewness was .164 (SE = .057), and kurtosis was -.752 (SE = .114). Statistics for the remaining criteria include: currency (M = 2.63, SD = .56, skewness = -1.243, and kurtosis = .560), appropriateness (M = 2.68, SD = .56, skewness = -1.534, and kurtosis = 1.383), and quality score (M = 2.67, SD = .45, skewness = -.398, and kurtosis = -.478). Descriptive statistics for each criterion and by institution are shown in Tables 7 through 10. Scores were also submitted to the Lilliefors Significance Correction of the Kolmogorov-Smirnov test of normality. Normality statistics are reported in Table 11, and boxplots, see Figures 1 through 4, offer a graphic representation of the distributions.

A Kruskal-Wallis test was conducted comparing the scores on coded citations across institutions. A statistically significant result was found for scholarliness ($H(2) = 107.11$, $p < .01$), indicating that the institutions differed from each other. Institution 2 averaged a placement of 774.37, while Institution 1 averaged a placement of 978.70 and Institution 3 averaged 1038.20. Currency also differed significantly ($H(2) = 43.11$, $p < .01$) across institutions. Institution 2 averaged a rank of 847.61 while Institution 1 averaged 918.41 and Institution 3 999.74. A statistically significant result was found for appropriateness scores ($H(2) = 57.70$, $p < .01$) when compared across institutions. Institution 2, with an average rank of 829.82, was lower than Institution 3, at 975.81 and Institution 1, at 986.95. Quality scores were likewise significantly different ($H(2) = 150.32$. $p < .01$). Institution 2 averaged 739.72 while Institution 1 averaged 988.36 and Institution 3 1068.03.

A one-way ANOVA was also calculated comparing each of the criteria across institutions. For scholarliness scores, a statistically significant difference was found ($F(2,1839) = 52.36$, $p < .01$). Tukey's HSD was calculated to determine the nature of

the differences among institutions. This analysis revealed that Institution 1 (M = 2.79, SD = .75) and Institution 3 (M = 2.88, SD = .82) dissertation citations were scored higher than Institution 2 (M = 2.47, SD = .74) dissertation citations on scholarliness. Scholarliness scores were not significantly different for either of the other two groups.

A statistically significant difference among institutions was also found with currency scores ($F(2,1839) = 25.60$, $p < .01$). Post hoc analysis revealed each institution varied significantly from the other, Institution 1 (M = 2.64, SD = .54), Institution 2 (M = 2.53, SD = .63), and Institution 3 (M = 2.74, SD = .47). Appropriateness scores were likewise significantly different ($F(2,1839) = 37.83$, $p < .01$) and Tukey's HSD revealed that Institution 1 (M = 2.77, SD = .46) and Institution 3 (M = 2.76, SD = .46) scored higher on appropriateness than Institution 2 (M = 2.54, SD = .66). Appropriateness scores were not significantly different from either of the remaining groups.

A one-way ANOVA was also computed for the quality rating, which was an average of the criteria reported above. Analysis indicated a statistically significant difference was found for overall quality of coded references among institutions ($F(2,1839) = 78.70$, $p < .01$). Tukey's HSD revealed Institution 2 (M = 2.51, SD = .45) varied significantly from Institution 1 (M= 2.73, SD = .41) and Institution 3 (M = 2.79, SD = .43), but quality scores did not significantly vary from either of the other institutions. Mean scores by institution for each criterion are displayed on Figures 5 through 8.

Analysis results were considered in conjunction with institutional characteristics. The less well-established school, Institution 2, systematically received lower scores across all criteria, which appeared to offer support to the *U. S. News & World Report* schools of education (2000) rankings. Results may also be explained by the heavy reliance of students from Institution 2 on sources other than scholarly journals and books. "Other" items, including ERIC documents, doctoral dissertations, and abstracts of dissertations, along with magazines and Web sites, accounted for over one-third of coded references from Institution 2. The literature is explicit in its emphasis on primary, scholarly resources (Babbie, 1998; Creswell, 1994; Fraenkel & Wallen, 1990; among others).

Results were also regarded alongside published standards for quality literature reviews. The purpose of the review is to provide a framework for establishing the importance of the study and for relating the results to other findings (Creswell, 1994), and technical advice for authors often includes guidelines for performing the review of literature. Included in these suggestions are the criteria of relevance and completeness, and synthesis and analysis. Specific to references, Creswell (1994) considers what types of literature might be reviewed and in what priority. Foremost are journal articles from respected national journals, then books that offer research summaries of the scholarly literature. With the admonition that one needs to be highly selective as quality varies considerably, other items to contemplate might include recent conference papers from major national conferences and dissertations.

To investigate further, the five highest scored dissertations were examined in more depth and were found to be frequently dated, partial, non-scholarly, or heavily reliant upon others' reviews or textbooks. This evidence suggests that dissertation citations were not consistently commented upon by reviewing faculty and/or standards for acceptable bibliographies were of no or little importance. Variation among institutions may be illustrative of differences in institutional characteristics, but may also be attributed to the faculty's expertise and assumed responsibility in communicating scholarship expectations.

Importance of the Study

Importance of the study can be discussed on two fronts; doctoral student performance as demonstrated by quality of dissertation references, and use of citation analysis for collection decisions. The assumption that doctoral students are on cutting edge of current research was not supported by this study, and professors of educational research should be concerned that students are not adequately mining the academic literature in the field. Certainly, it can be argued that citation behavior may have little relationship to the quality of the research performed by the student; however, it is also reasonable to expect that as part of their professional preparation students be fully conversant in accessing and evaluating the scholarly literature, and able to demonstrate this via dissertation references.

Professors, if they wish to see an improvement in the resources cited by students, will have to present more clearly defined expectations of the cited literature and be willing to offer feedback regarding the quality of cited references. Tuckman (1990) suggests that existing strategies of manuscript evaluation are clearly inadequate and, due to the lack of consensus on research standards in the field, offers a framework from which to evaluate the literature review. At minimum, this study suggests further local investigation as to whether graduate students satisfactorily review all resources, and the need for increased faculty engagement as expressed by higher standards, more intensive instruction, and attention to the literature review process.

Grant and Graue (1999) explored the concept of what constitutes evidence in reviews and called for more rigorous standards to determine credible research. Cognizant of the fact that the density of work available on a given topic varies, they recommend the lack of acceptable research be discussed in the review. Of the reviewed dissertations, only two included the criteria used to identify source materials. This methodology is suggested to inform the reader as to the extent of the information sought and is an indication of the amount and quality of literature available on the topic. An example of the methodology used that might be included in the review of literature chapter follows:

> The published literature was searched using ERIC, Education Abstracts, Dissertation Abstracts, and PsycINFO databases. Higher Education Abstracts was searched in print. In addition, the bibliographies of all acceptable studies

and review articles from the past two years were searched for potentially relevant citations.

English language published literature from 1985 through current year (2000) was sought, utilizing the following search terms:

Learning communities; collaboration OR cooperation; literacy

Citation analysis studies are often used as a basis for collection management decisions, but there is a question of validity as to what questions these studies can answer. Library collections at each of the institutions examined held a large majority of the materials cited by the doctoral students. While previous research has assumed this indicates an adequate collection, the results from this study suggest that doctoral students simply do not possess sufficient knowledge of information resources, expertise in mining the literature of the field, or the ability to consistently discriminate between popular and scholarly resources to create quality bibliographies.

Results of this study support Kuyper-Rushing's (1999) findings that analysis from a single institution could result in a skewed list of journals. This study likewise found a journal list derived from dissertation reference analysis from a single institution varied significantly from a list generated through analysis of a larger institutional base. Students do not appear to seek sources not locally owned; and thus, it may be inferred single institution journal lists can be used to reflect local use, but do not necessarily provide information on which journals should be added to the collection. Citation analysis may be valuable for serials cancellation projects, but using single institution analysis to indicate collection adequacy should proceed cautiously.

Ultimately, whether due to graduation or attrition the doctoral student population is by nature transient, and basing collection decisions on their research interests and information searching prowess should not be the sole means of determining a core journal collection. Only after the quality of dissertation references is established and core lists are created by comparison to external institutions can a journal list be considered as one tool for building the research collection. To arrive at a more robust indication of collection use and needs, it is suggested citation analysis be used in conjunction with other methods, such as journal impact ratings and faculty publication citation analysis.

References

Babbie, E. (1998). *The practice of social research* (8th ed.). Belmont, CA: Wadsworth Publishing.

Barry, C. A. (1997). Information skills for an electronic world: Training doctoral research students. *Journal of Information Science, 23*(3), 225-238.

Buttlar, L. (1999). Information sources in library and information science doctoral research. *Library & Information Science Research, 21*(2), 227-245.

Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches.* Thousand Oaks, CA: Sage Publications.

Davis, P. M. (2002). The effect of the Web on undergraduate citation behavior: A 2000 update. *College & Research Libraries, 63*(1), 53-60.

Davis P. M. & Cohen, S. A. (2001). The effect of the Web on undergraduate citation behavior, 1996-1999. *Journal of the American Society for Information Science and Technology, 52*(4), 309-314.

Diadoto, V. (1994). *Dictionary of bibliometrics*. Binghampton, NY: Haworth Press.

Fraenkel, J. R. & Wallen, N. E. (1990). *How to design and evaluate research in education* (3rd ed.). New York: McGraw-Hill.

Gooden, A. M. (2001). Citation analysis of chemistry doctoral dissertations: An Ohio State University case study. *Issues in Science and Technology Librarianship, 32.* Retrieved January 22, 2002, from http://www.istl.org/istl/01-fall/refereed.html

Grant, C. A. & Graue, E. (1999). (Re)Viewing a review: A case history of the "Review of Educational Research." *Review of Educational Research, 69*(4), 384-396.

Hall, B. W., Ward, A. W. & Comer, C. B. (1988). Published educational research: An empirical study of its quality. *Journal of Educational Research, 81*(3), 182-189.

Hernon, P. (1994). Serious stuff to ponder. *Library & Information Science Research, 16*, 271-278.

Herring, S. D. (2002). Use of electronic resources in scholarly electronic journals: A citation analysis. *College & Research Libraries, 63*(4), 334-340.

Kohl, D. F. & Wilson, L. A. (1986). Effectiveness of course-integrated bibliographic instruction in improving coursework. *RQ, 26*, 206-211.

Kriz, H. M. (1984). *Library management implications of journal citation patterns in engineering doctoral dissertations.* (ERIC Document Reproduction Service No. ED243481)

Kuyper-Rushing, L. (1999). Identifying uniform core journal titles for music libraries: A dissertation citation study. *College & Research Libraries, 60*(2), 153-163.

Radhakrishna, R. B. (1994). *A study of core journals used by agricultural and extension educators.* (ERIC Document Reproduction Service No. ED380550)

Rusch-Feja D. & Siebeky, U. (1999). Evaluation of usage and acceptance of electronic journals. *D-Lib Magazine.* Retrieved May 24, 2002, from http://www.dlib.org/dlib/octorber99/rusch-feja/10rusch-feja-full-report.html

Schools of Education. (2000, April 10). *U. S. News & World Report, 128*, p. 114.

St. Clair, G. & Hernon, P. (1996). Improving quality. *Journal of Academic Librarianship, 22*(6), 421-422.

Strohl, B. (1999). *Collection evaluation techniques: A short, selective, practical, current, annotated bibliography, 1990-1998.* Chicago: American Library Association.

Summers, E. G. & Clark, B. R. (1986). A citation analysis of core journals on education of the hearing impaired. *A.C.E.H.I. Journal, 12*(2), 111-117.

Tuckman, B. W. (1990). A proposal for improving the quality of published educational research. *Educational Researcher, 19*(9), 22-25.

Walcott, R. (1994). Local citation studies - - a shortcut to local knowledge. *Science & Technology Libraries, 14*(3), 1-14.

Wallace, D. P. (1989). Bibliometrics and citation analysis. In Olsgaard, J. N. (Ed.), *Principles and applications of information science for library professionals* (pp. 10-26). Chicago: American Library Association.

Ward, A. W. (1975). Evaluation of published educational research: A national survey. *American Educational Research Journal, 12*(2), 109-128.

Williams, B. A. (1997). *A citation analysis of three American nursing journals.* (ERIC Document Reproduction Service No. ED413933)

Zaporohetz, L. E. (1987). *The dissertation literature review: How faculty advisors prepare their doctoral candidates.* (Doctoral dissertation, University of Oregon, 1987).

TABLE 1
Dissertation Information by Institution

Institution	Average Number of Total Citations	Average Number of Citations Coded	Average Number of Pages
1	83.60 (SD=31.40)	42.90 (SD=16.55)	199.40 (SD=74.32)
2	90.40 (SD=30.63)	71.80 (SD=34.89)	119.60 (SD=24.38)
3	89.10 (SD=38.21)	69.50 (SD=35.25)	119.30 (SD=44.30)
TOTAL	87.70 (SD=32.54)	61.40 (SD=32.01)	146.10 (SD=63.06)

TABLE 2
Material Type by Institution

Institution		Journal Articles	Mono-graphs	"Other"	Maga-zines	Web Sites	Total
1	Count	188	188	44	8	1	429
	% within Institution	43.8%	43.8%	10.3%	1.9%	.2%	100.0%
2	Count	284	187	225	14	8	718
	% within Institution	39.6%	26.0%	31.3%	1.9%	1.1%	100.0%
3	Count	357	249	68	6	15	695
	% within Institution	51.4%	35.8%	9.8%	.9%	2.2%	100.0%
TOTAL	Count	829	624	337	28	24	1842
	% of Total	45.0%	33.9%	18.3%	1.5%	1.3%	100.0%

TABLE 3
Core Journal Title List with Citation Count

Core Journal Titles	Citation Count
Journal of learning disabilities	36
Exceptional children	32
Journal of educational psychology	25
Phi Delta Kappan	20
Remedial and special education	20
Psychology in the schools	19
American educational research journal	17
Child development	13
Learning disabilities research and practice	13
Learning disability quarterly	13
Review of educational research	13
Evaluation and program planning	12
Journal of special education	12
Reading research quarterly	12
Educational leadership	11
Journal of educational research	11
Teaching exceptional children	11

TABLE 4
Journal Title List with 5 or More Citations, Institution 1

Journal Titles	Citation Count
Journal of learning disabilities	13
Exceptional children	8
Psychology in the schools	7
School counselor	7
School psychology review	7
NASSP bulletin	6
Phi Delta Kappan	6
Journal of moral education	5

TABLE 5
Journal Title List with 5 or More Citations, Institution 2

Journal Titles	Citation Count
Exceptional children	19
Evaluation and program planning	12
Journal of educational psychology	12
Remedial and special education	11
Journal of learning disabilities	10
Chronicle of higher education	7
Journal of research on computing in education	7
Journal of special education	7
Phi Delta Kappan	7
Journal for research in mathematics education	6
Journal of educational research	6
Review of educational research	6
Teaching exceptional children	6
Educational technology	5
Journal of counseling psychology	5
Journal of reading	5
Learning disability quarterly	5

TABLE 6
Journal Title List with 5 or More Citations, Institution 3

Journal Titles	Citation Count
American educational research journal	14
Journal of learning disabilities	13
Child development	12
Journal of educational psychology	12
Learning disabilities research and practice	11
Early childhood research quarterly	10
Psychology in the schools	10
Reading research quarterly	10
Phi Delta Kappan	7
Topics in early childhood special education	7
Childhood education	6
Journal of early Intervention	6
Learning disability quarterly	6
Psychological bulletin	6
Remedial and special education	6
Review of educational research	6
Young children	6
Educational leadership	5
Elementary school journal	5
Exceptional children	5
Journal of educational research	5
Journal of teacher education	5

TABLE 7
Scholarliness, Selected Descriptive Statistics, by Institution

Institution		Statistic	S.E.
1	Mean	2.790	3.610
	Median	3.000	
	St. Dev.	.750	
	Skewness	.099	.118
	Kurtosis	-.722	.235
2	Mean	2.470	2.780
	Median	2.000	
	St. Dev.	.740	
	Skewness	.544	.091
	Kurtosis	-.240	.182
3	Mean	2.880	3.100
	Median	3.000	
	St. Dev.	.820	
	Skewness	-.176	.093
	Kurtosis	-.728	.185

TABLE 8
Currency, Selected Descriptive Statistics, by Institution

Institution		Statistic	S.E.
1	Mean	2.640	2.610
	Median	3.000	
	St. Dev.	.540	
	Skewness	-1.137	.118
	Kurtosis	.285	.235
2	Mean	2.530	2.360
	Median	3.000	
	St. Dev.	.630	
	Skewness	-.994	.091
	Kurtosis	-.092	.182
3	Mean	2.740	1.800
	Median	3.000	
	St. Dev.	.47	
	Skewness	-1.523	.093
	Kurtosis	1.293	.185

TABLE 9
Appropriateness, Selected Descriptive Statistics, by Institution

Institution		Statistic	S.E.
1	Mean	2.770	2.200
	Median	3.000	
	St. Dev.	.460	
	Skewness	-1.821	.118
	Kurtosis	2.449	.235
2	Mean	2.540	2.460
	Median	3.000	
	St. Dev.	.660	
	Skewness	-1.127	.091
	Kurtosis	.058	.182
3	Mean	2.760	1.740
	Median	3.000	
	St. Dev.	.460	
	Skewness	-1.678	.093
	Kurtosis	1.835	.185

TABLE 10
Quality Score, Selected Descriptive Statistics, by Institution

Institution		Statistic	S.E.
1	Mean	2.730	1.980
	Median	2.660	
	St. Dev.	.411	
	Skewness	-.502	.118
	Kurtosis	-.236	.235
2	Mean	2.510	1.693
	Median	2.666	
	St. Dev.	.453	
	Skewness	-.060	.091
	Kurtosis	-.545	.182
3	Mean	2.794	1.638
	Median	3.000	
	St. Dev.	.431	
	Skewness	-.722	.093
	Kurtosis	.083	.185

TABLE 11
Summary Statistics, Tests of Normality

		Kolmogorov-Smirnov (*a*)		
Criteria	Institution	Statistic	df	Sig.
Scholarliness	1	.241	429	.000
	2	.326	718	.000
	3	.229	695	.000
Currency	1	.416	429	.000
	2	.375	718	.000
	3	.463	695	.000
Appropriateness	1	.480	429	.000
	2	.391	718	.000
	3	.475	695	.000
Quality Score	1	.206	429	.000
	2	.146	718	.000
	3	.223	695	.000

a Lilliefors Significance Correction

FIGURE 1
Boxplots of Scholarliness, by Institution

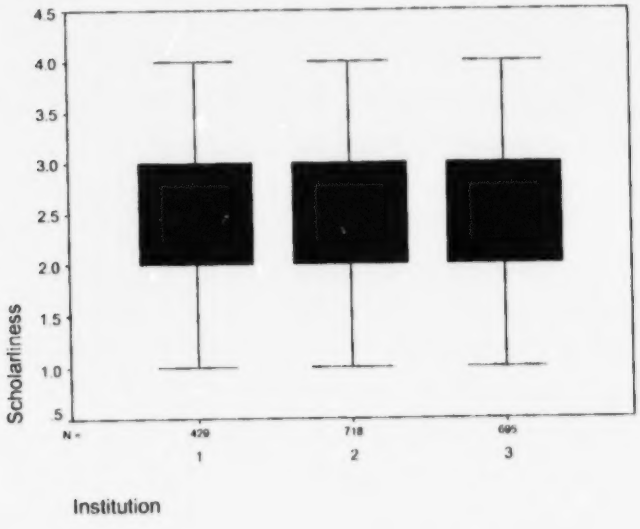


FIGURE 2
Boxplots of Currency, by Institution

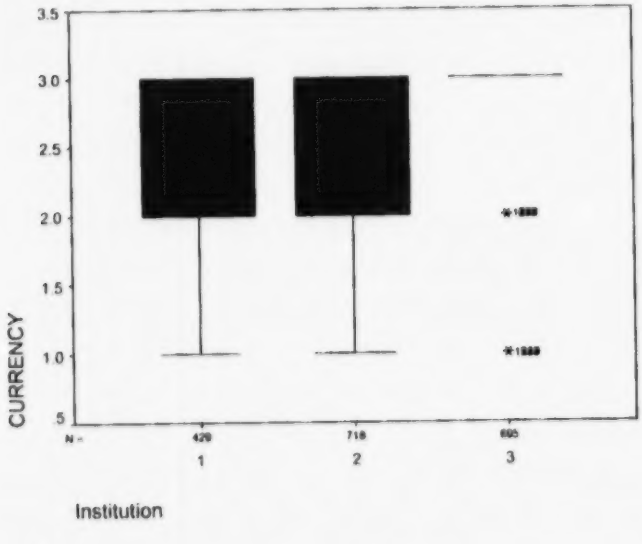


FIGURE 3
Boxplots of Appropriateness, by Institution

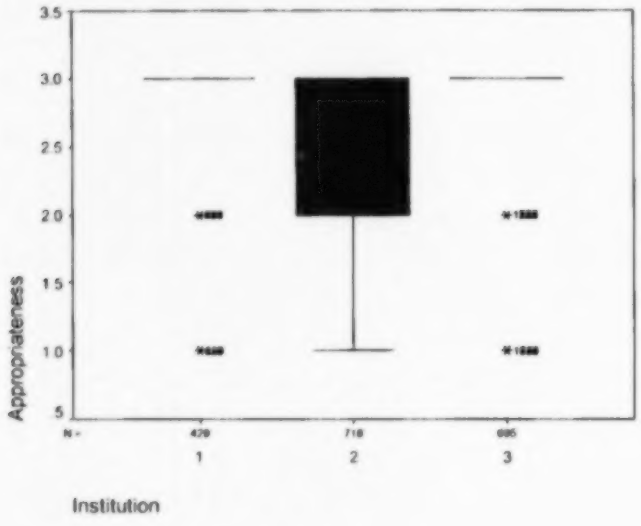


FIGURE 4
Boxplots of Quality Score, by Institution

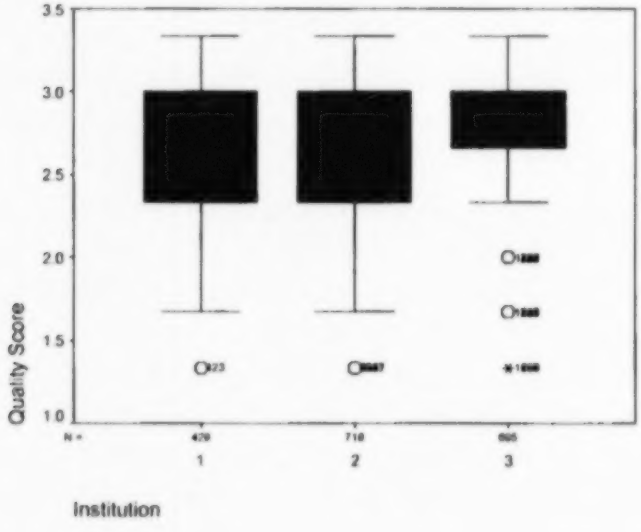


FIGURE 5
Mean of Scholarliness, by Institution

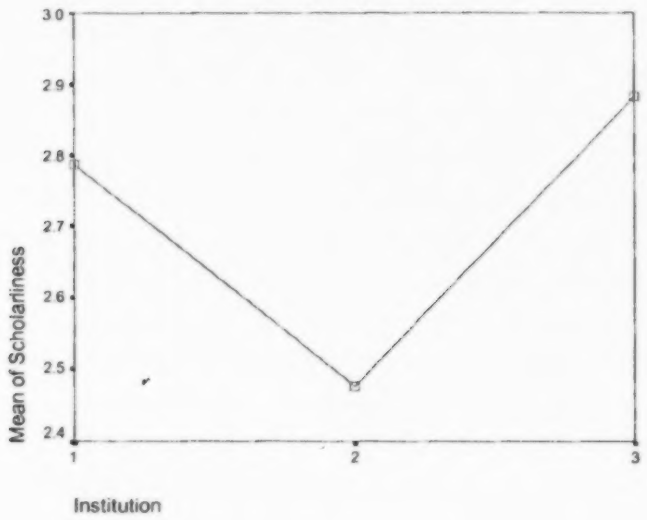


FIGURE 6
Mean of Currency, by Institution

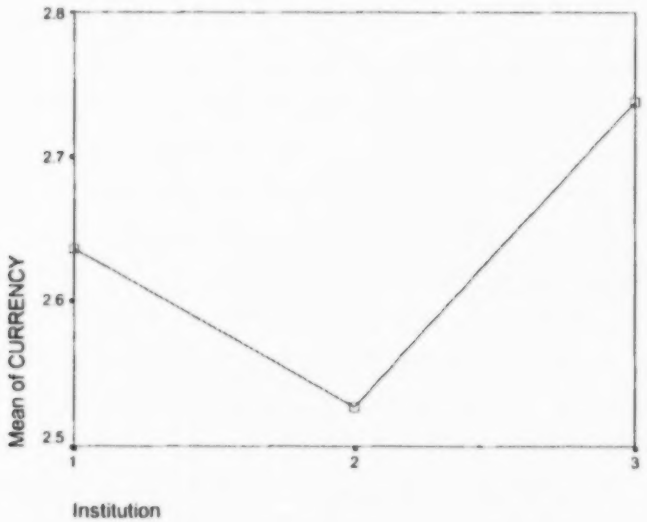


FIGURE 7
Mean of Appropriateness, by Institution

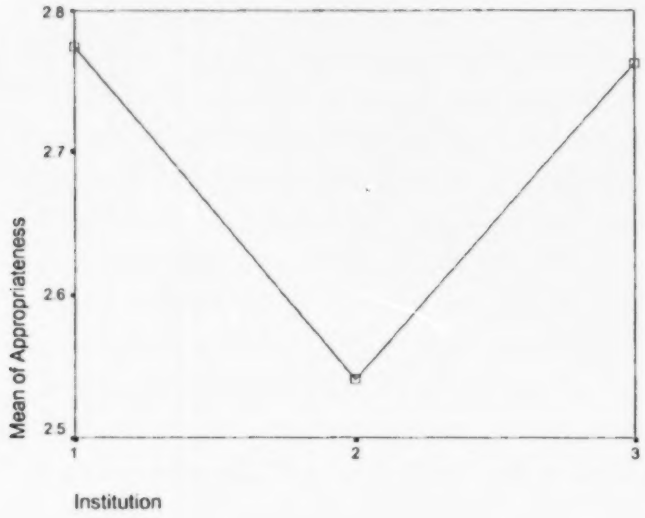
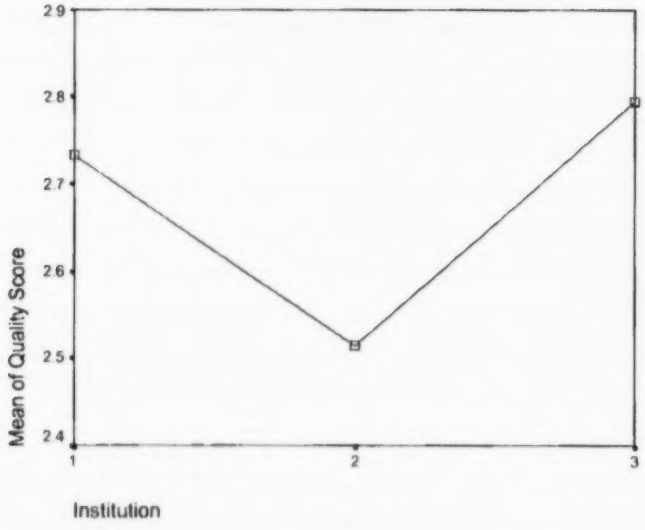


FIGURE 8
Mean of Quality Score, by Institution



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